PART XIX Respiratory System

حلول مصدر نيلسون mcq

د. نور محمد عثمان

كليه الطب ج/ الموصلَ

ZUHAIR ALMUSAWI

1. Grunting is produced by expiration against a partially closed glottis and is an attempt to maintain positive airway pressure during expiration for as long as possible.
It is **MOST** commonly prominent in

A. epiglottitis
B. hyaline membrane disease
C. asthma
D. croup
E. choanal atresia

2. The pulmonary vascular resistance and the pulmonary artery pressure to the systemic arterial resistance, from 3 mo after birth through childhood and adolescence is approximately

A. 15% of the systemic values
B. 25% of the systemic values
C. 35% of the systemic values
D. 45% of the systemic values
E. 55% of the systemic values

3. Chest CT is of a particular importance in the evaluation of the following lesions **EXCEPT**

A. mediastinal lesions
B. cystic parenchymal lesions
C. pulmonary embolisms
D. vascular rings
E. bronchiectasis

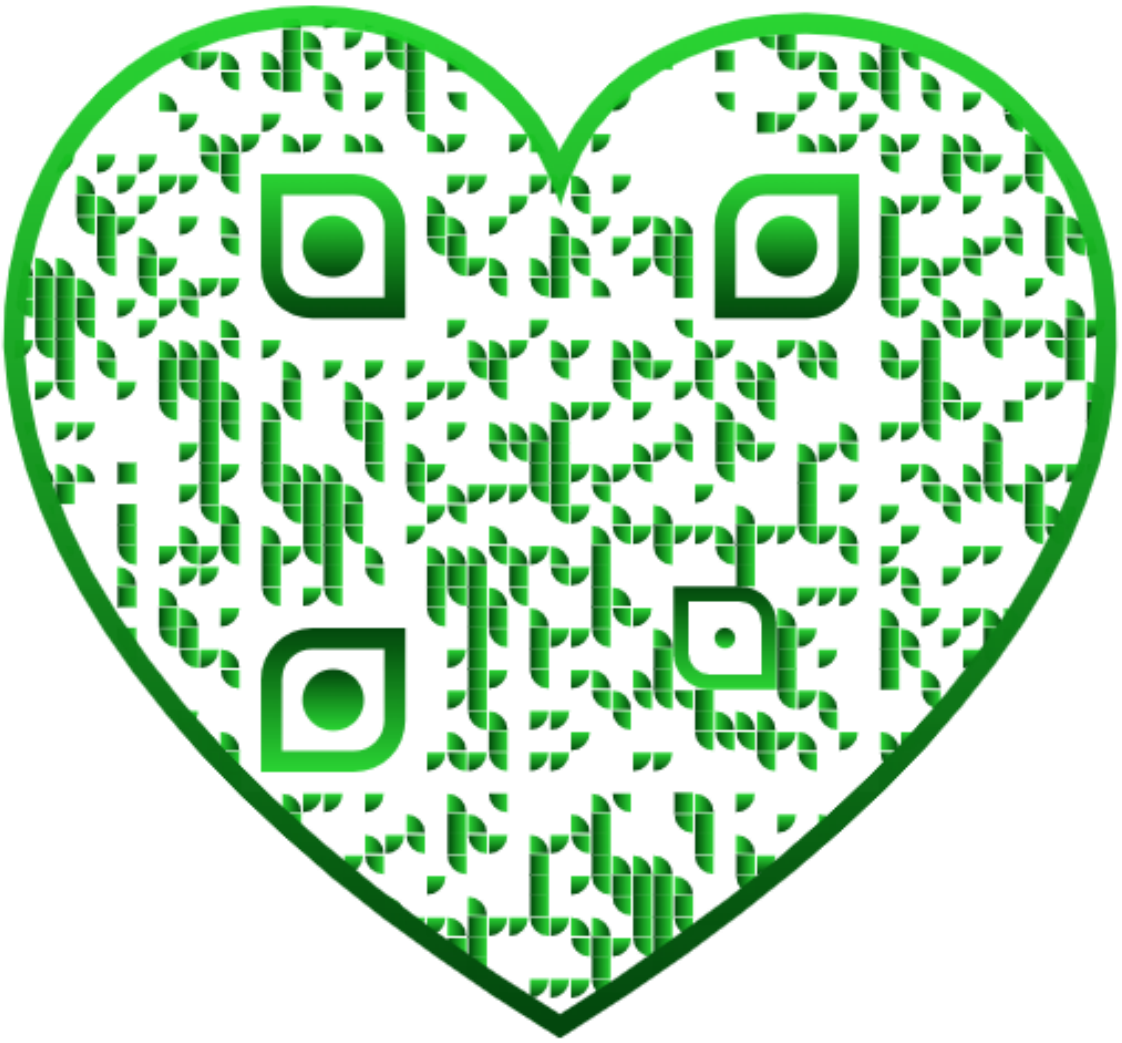
MRI is an excellent procedure to delineate hilar and vascular anatomy associated with vascular rings or slings

4. Rigid bronchoscopy is preferentially indicated for

A. persistent pneumonia
B. extracting foreign bodies
C. atelectasis
D. persistent wheeze
E. interstitial disease

5. The following infections can cause sudden death in infants **EXCEPT**

A. bronchiolitis (respiratory syncytial virus)
B. infant botulism



C. pertussis
D. Staph. pneumonia
E. sepsis

The following infections can cause sudden death in infants: sepsis, meningitis, encephalitis, brain abscess, hepatitis, pyelonephritis, bronchiolitis (respiratory syncytial virus), infant botulism, and pertussis.

6. Declines of 50% or more in rates of sudden infant death syndrome (SIDS0 in the USA and around the world have occurred in the past decade. The reductions in risk appear to be related primarily to

A. decreases in placing infants prone for sleep
B. exclusive breast-feeding
C. adequate immunizations
D. avoidance of soft sleeping surface
E. avoidance of bed sharing with parent(s)

7. Foreign bodies are often placed in the nose by small children and developmentally delayed children.
Of the following, the **MOST** common presenting clinical symptom is

A. mucopurulent nasal discharge
B. foul nasal odor
C. epistaxis
D. nasal obstruction
E. mouth breathing

8. Common causes of childhood epistaxis include the following **EXCEPT**

A. epistaxis digitorum
B. foreign bodies
C. significant gastroesophageal reflux into the nose
D. dry air
E. allergic rhinitis

9. Of the following, the **MOST** common childhood cause of nasal polyposis is

A. chronic sinusitis
B. allergic rhinitis
C. Samter triad
D. Kartagener syndrome
E. cystic fibrosis

10. The following may be effective as a common cold treatment **EXCEPT**

A. vitamin C
B. first generation antihistamine
C. topical or oral adrenergic agents
D. ipratropium bromide
E. honey

Vitamin C, guaifenesin, and inhalation of warm, humidified air are no more effective than placebo for the treatment of cold symptoms.

11. Lemierre syndrome is characterized by septic thrombophlebitis of the internal jugular veins with septic pulmonary emboli, producing hypoxia and pulmonary infiltrates, it is a complication of pharyngitis caused by

A. group A β-hemolytic streptococcus
B. Arcanobacterium haemolyticum
C. Mycoplasma pneumoniae
D. Fusobacterium necrophorum
E. Corynebacterium diphtheriae

12. Persistent cough may need to be sought beyond the lungs, because cough receptors also reside in the following regions **EXCEPT**

A. pharynx
B. paranasal sinuses
C. stomach
D. nose
E. external auditory canal

13. Habit cough ("psychogenic cough" or "cough tic") must be considered in any child with a cough that has lasted for weeks or months, that has been refractory to treatment and is

A. abrupt
B. loud
C. barking quality
D. all day, never during sleep
E. paroxysmal

14. A "silent chest" with infiltrates should arouse suspicion of all the following **EXCEPT**

A. alveolar proteinosis
B. bronchopulmonary dysplasia
C. Pneumocystis jiroveci infection
D. interstitial pneumonitis
E. tumors

15. The barking cough typical of croup is rare in

A. laryngotracheobronchitis
B. acute epiglottitis
C. acute infectious laryngitis
D. spasmodic croup
E. measles croup

16. Children with croup should be hospitalized for any of the following **EXCEPT**

A. progressive stridor

' Children with croup should be hospitalized for any of the following: progressive stridor, severe stridor at rest, respiratory distress, hypoxia, cyanosis, depressed mental status, poor oral intake, or the need for reliable observation.

B. severe stridor at rest
C. cyanosis
D. depressed mental status
E. congenital heart disease

17. Bacterial tracheitis is characterized by all the following **EXCEPT**
A. Staphylococcus aureus is the most commonly isolated pathogen
B. incidence and severity do not differ by sex
C. mean age is between 5 and 7 yr
D. considered a primary bacterial illness
E. more common than epiglottitis in vaccinated populations

Bacterial tracheitis often follows a viral respiratory infection (especially laryngotracheitis), so it may be considered a bacterial complication of a viral disease, rather than a primary bacterial illness.

18. The **MOST** common congenital laryngeal anomaly that produces stridor is
A. vocal cord paralysis
B. laryngomalacia
C. congenital subglottic stenosis
D. congenital laryngeal web
E. congenital subglottic hemangioma

19. Risk factors for persistent wheezing include all the following **EXCEPT**
A. parental history of asthma
B. paternal smoking
C. persistent rhinitis (apart from acute upper respiratory tract infections)
D. eczema at <1 yr of age
E. frequent episodes of wheezing during infancy

19 * P.S - maternal smoking is a risk factor. *

20. Cardiovascular causes of wheezing include
A. right atrial enlargement
B. left atrial enlargement
C. right ventricular enlargement
D. left ventricular enlargement
E. coarctation of aorta

21. Regarding congenital lobar emphysema (CLE), the following are true **EXCEPT**
A. familial occurrence has been reported
B. usually no cause of CLE can be identified
C. usually become apparent in the neonatal period
D. many cases are diagnosed by antenatal ultrasonography
E. left upper lobe is the most affected site

22. Bronchiolitis obliterans (BO) is a rare chronic obstructive lung disease of the bronchioles and smaller airways. An insult to the lower respiratory tract occurs, resulting in fibrosis of the small airways.
Of the following, the **BEST** mean of establishing its diagnosis is

A. chest radiographs
B. pulmonary function tests
C. ventilation-perfusion scans
D. chest CT
E. open lung biopsy

23. Pulmonary edema is traditionally separated into two categories according to cause (cardiogenic and non-cardiogenic). Non-cardiogenic pulmonary edema, in its most severe state, is also known as acute respiratory distress syndrome (ARDS).
The following radiographic features is usually present in non-cardiogenic pulmonary edema

A. septal lines
B. peribronchial cuffing
C. pleural effusions
D. air bronchograms
E. even or central distribution of edema

24. The recurrent aspiration of small quantities of gastric, nasal, or oral contents can lead to several clinical presentations, including recurrent bronchitis or bronchiolitis; recurrent pneumonia; atelectasis; wheezing; cough; apnea; and/or laryngospasm.
The **MOST** common underlying problem associated with recurrent pneumonias in hospitalized children is

A. oropharyngeal incoordination
B. esophageal foreign body
C. nasoenteric tube
D. poor oral hygiene
E. bronchopulmonary dysplasia

25. The **MOST** common etiology of pulmonary infiltrates with eosinophilia (PIE) is

A. simple pulmonary eosinophilia
B. acute eosinophilic pneumonia
C. chronic eosinophilic pneumonia
D. allergic bronchopulmonary aspergillosis
E. parasitic Infections

26. The **MOST** frequent pathogens of pneumonia in children 5 yr and older is

A. Streptococcus pneumoniae
B. Mycoplasma pneumoniae

Streptococcus pneumoniae (pneumococcus) is the most common bacterial pathogen in children 3 wk to 4 yr of age, whereas Mycoplasma pneumoniae and Chlamydophila pneumoniae are the most frequent pathogens in children 5 yr and older.

C. group A streptococci
D. H. influenzae (type b, nontypable)
E. adenovirus

27. The **MOST** frequent pathogen of pneumonia in children 4 mo-4 yr is
A. Streptococcus pneumoniae
B. Mycoplasma pneumoniae
C. group A streptococci
D. H. influenzae (type b, nontypable)
E. Respiratory syncytial virus

The most frequent pathogens of pneumonia in children 4 mo-4 yr (in order of freguency) are Respiratory syncytial virus, other respiratory viruses (parainfluenza viruses, influenza viruses, and adenovirus), S. pneumoniae, H. influenzae (type b, nontypable), Mycoplasma pneumoniae, and group A streptococcus.

28. Recurrent pneumonia is defined as
A. 2 or more episodes in a single year, with radiographic clearing between occurrences
B. 2 or more episodes in a single year, without radiographic clearing between occurrences
C. 3 or more episodes in a single year, with radiographic clearing between occurrences
D. 3 or more episodes in a single year, without radiographic clearing between occurrences
E. 4 or more episodes in a single year

29. The **MOST** consistent clinical manifestation of pneumonia is
A. subcostal retractions
B. grunting
C. tachypnea
D. fever
E. cough

30. The following are indications for admission to a hospital in children with pneumonia **EXCEPT**
A. age <6 mo
B. sickle cell anemia
C. multiple lobe involvement
D. moderate to severe respiratory distress
E. vomiting

31. In the developed world, the **MOST** common cause of clinically significant bronchiectasis is
A. primary ciliary dyskinesia
B. foreign body aspiration
C. aspiration of gastric contents

D. immune deficiency syndromes
E. cystic fibrosis

32. The **MOST** common complaint in patients with bronchiectasis is
A. cough and production of copious purulent sputum
B. hemoptysis
C. fever
D. anorexia
E. poor weight gain

33. Cystic fibrosis (CF) can be presented with all the following **EXCEPT**
A. salt depletion
B. pansinusitis
C. rectal polyposis
D. pancreatitis
E. cholelithiasis

34. The earliest pathologic lesion in the lung of a patient with cystic fibrosis is
A. bronchiolitis
B. bronchitis
C. bronchiolectasis
D. bronchiectasis
E. interstitial lung disease

The earliest pathologic lesion in the lung is that of bronchiolitis (mucous plugging and an inflammatory response in the walls of the small airways); with time, mucus accumulation and inflammation extend to the larger airways (bronchitis).

35. Arterial blood gas study in cystic fibrosis shows
A. hypernatraemic hypochloraemic metabolic alkalosis
B. hyponatraemic hypochloraemic metabolic acidosis
C. hyponatraemic hyperchloraemic metabolic alkalosis
D. hyponatraemic hypochloraemic metabolic alkalosis
E. hypernatraemic hyperchloraemic metabolic acidosis

36. The **MOST** common presenting feature of cystic fibrosis is
A. failure to thrive
B. persistent respiratory symptoms
C. abnormal stools
D. meconium ileus
E. hepatobiliary disease

37. Regarding cystic fibrosis, all the following are true **EXCEPT**
A. delayed sexual development
B. more than 95% of males are azoospermic
C. sexual function is generally impaired

D. high incidence of inguinal hernia
E. diminished female fertility rate

38. All the following conditions are associated with false-positive sweat test results **EXCEPT**
A. eczema
B. anorexia nervosa
C. hypothyroidism
D. Klinefelter syndrome
E. malnutrition

39. The finding of the following pathogen on culture of the lower airways (sputum) strongly suggests a diagnosis of cystic fibrosis
A. B. cepacia
B. gram-negative rods
C. nontuberculous mycobacterial species
D. Mycoplasma
E. S. aureus

+ P. aeruginosa strongly associated with C.F

40. All the following inhalation therapies in cystic fibrosis are true **EXCEPT**
A. β-agonists may decrease PaO_2 acutely
B. human recombinant DNase improves pulmonary function
C. N-acetylcysteine is toxic to ciliated epithelium
D. nebulized hypertonic saline improves mucociliary clearance
E. aerosolized antibiotics are often used when the airways are colonized with S. aureus

41. The following are clinical manifestations of primary ciliary dyskinesia (PCD) **EXCEPT**
A. recurrent pneumonia
B. chronic otitis media
C. chronic pansinusitis
D. dextrocardia
E. retinitis pigmentosa

42. The following are causes of diffuse alveolar hemorrhage (DAH) syndromes with pulmonary capillaritis **EXCEPT**
A. Goodpasture syndrome
B. Henoch-Schonlein purpura
C. Wegener granulomatosis
D. Heiner syndrome
E. Behcet syndrome

43. Pathologic findings of pulmonary hemosiderosis in association with cow's milk hypersensitivity include all the following **EXCEPT**

A. elevations of IgA
B. peripheral eosinophilia
C. alveolar deposits of IgG, IgA
D. alveolar deposits of C3
E. high titers to cow's milk protein

44. The classic laboratory findings of idiopathic pulmonary hemosiderosis (IPH) are the following **EXCEPT**

A. microcytic hypochromic anemia
B. elevated reticulocyte count
C. normal plasma bilirubin
D. reduced serum iron
E. elevated iron-binding capacity

45. The treatment of choice of idiopathic pulmonary hemosiderosis (IPH) is

A. transfusion of blood products
B. systemic corticosteroids
C. cyclophosphamide
D. chloroquine
E. lung transplantation

46. A commonly encountered risk factor for deep venous thrombosis (DVT) and pulmonary embolism (PE) in the pediatric population is

A. central venous catheter
B. hematologic malignancies
C. sickle cell diease
D. nephrotic syndrome
E. antiphospholipid antibody syndrome

47. The **MOST** common form of pulmonary malignancy in children is

A. bronchial carcinoid
B. adenoid cystic carcinoma
C. mucoepidermoid carcinoma
D. metastatic lesions
E. pulmonary blastoma

48. Pleurisy or inflammation of the pleura is often accompanied by an effusion. Of the following, the **MOST** common cause of pleural effusion in children is

A. tuberculosis
B. heart failure

C. bacterial pneumonia
D. rheumatoid arthritis
E. metastatic intrathoracic malignancy

49. The **MOST** common cause of pneumomediastinum in older children and teenagers is
A. dental extractions
B. adenotonsillectomy
C. tuberculosis
D. mycoplasma pneumonia
E. acute asthma

50. The following conditions are associated with increased intrathoracic pressure causing pneumothorax in children **EXCEPT**
A. asthma
B. pneumatocele
C. bronchiolitis
D. cystic fibrosis
E. airway foreign body

51. One of the following is a rare cause of hydrothorax in children
A. cardiac disease
B. renal disease
C. hepatic disease
D. severe nutritional edema
E. vascular obstruction by neoplasms

52. Of the following, the **LEAST** likely cause of hemothorax in children is
A. chest trauma
B. intrathoracic neoplasms
C. costal exostoses
D. blood dyscrasias
E. rupture of an aneurysm

53. All the following are true in chylothorax **EXCEPT**
A. fluid may be clear
B. fluid triglyceride level is >110 mg/dL
C. pleural fluid:serum triglyceride ratio is >1.0
D. pleural fluid:serum cholesterol ratio is <1.0
E. cells are primarily B lymphocytes

54. Bronchopulmonary dysplasia (BPD) is a syndrome characterized by signs and symptoms of chronic lung disease that originates in the neonatal period. An accepted definition includes a postnatal oxygen requirement for

A. 7 days
B. 14 days
C. 21 days
D. 28 days
E. 35 days

55. The **MOST** common physical finding of the pulmonary exam in bronchopulmonary dysplasia (BPD) is

A. tachypnea
B. mouth breathing
C. increased anteroposterior diameter of the chest
D. intercostal retractions
E. clear breath sounds

56. The etiology of wheezing in bronchopulmonary dysplasia (BPD) may be due to all the following **EXCEPT**

A. lower airway inflammation
B. bronchial smooth muscle irritation
C. intraluminal exudate
D. bronchial smooth muscle hypertrophy
E. airway malacia

57. The following are features of pectus excavatum (funnel chest) **EXCEPT**

A. occurs in 1 : 400 births
B. usually associated with a connective tissue disorder
C. 9 : 1 male preponderance
D. accounts for >90% of congenital chest wall anomalies
E. positive family history in one third of cases

58. Pectus carinatum is characterized by all the following **EXCEPT**

A. accounting for 5-15% of congenital chest wall anomalies
B. females are affected 4 times more often than males
C. high familial occurrence
D. common association of mild to moderate scoliosis
E. association with mitral valve disease

59. Acute respiratory insufficiency is often the **MOST** prominent clinical manifestation of

A. Duchenne muscular dystrophy

B. spinal muscular atrophy
C. congenital myotonic dystrophy
D. myasthenia gravis
E. Guillain-Barre syndrome

60. Asphyxiating thoracic dystrophy (Jeune syndrome) is associated with the following skeletal abnormalities **EXCEPT**

A. narrowed thorax
B. horizontal ribs
C. short extremities
D. bell-shaped chest cage
E. low clavicles

61. Physical examination and an upright, posteroanterior radiograph with subsequent measurement of the angle of curvature (Cobb technique) remain the gold standard for assessment of scoliosis.
Scoliosis is defined when curves

A. ≥5 degrees
B. ≥10 degrees
C. ≥15 degrees
D. ≥20 degrees
E. ≥25 degrees

د. نور محمد عثمان
كليه الطب ج/ الموصلَ

PART XIX Respiratory System ANSWERS

ZUHAIR ALMUSAWI

1.**(B).** Grunting is most beneficial in alveolar diseases that produce widespread loss of FRC, such as in pulmonary edema, hyaline membrane disease, and pneumonia. Grunting is also effective in small airway obstruction (bronchiolitis) to maintain a higher positive pressure in the airway during expiration, decreasing the airway collapse.
2.**(A).** The PVR is ∼50% of the systemic arterial resistance 3 days after birth. In the next several wk after birth as pulmonary arterial musculature in the tunica media involutes, there is a further decline in PVR and therefore in pulmonary artery pressure. Two to 3 mo after birth, the PVR and the pulmonary artery pressure are ∼15% of the systemic values, a relationship that exists through childhood and adolescence.
3.**(D).** MRI is an excellent procedure to delineate hilar and vascular anatomy associated with vascular rings or slings.
4.**(B).** Rigid bronchoscopy is preferentially indicated for extracting foreign bodies, for removing tissue masses, and in patients with massive hemoptysis. In other cases, the flexible scope offers the advantages that it can be passed through endotracheal or tracheostomy tubes can be introduced into bronchi that come off the airway at acute angles, and can be safely and effectively inserted with topical anesthesia and conscious sedation.
5.**(D).** The following infections can cause sudden death in infants: sepsis, meningitis, encephalitis, brain abscess, hepatitis, pyelonephritis, bronchiolitis (respiratory syncytial virus), infant botulism, and pertussis.
6.**(A).** The reductions in risk appear to be related primarily to decreases in placing infants prone for sleep and increases in placing them supine. A number of other risk factors also have significant associations with SIDS; although many are nonmodifiable and most of the modifiable factors have not changed appreciably, self-reported maternal smoking prevalence during pregnancy has decreased by 25% in the past decade.
7.**(A).** Presenting clinical symptoms include history of insertion of foreign bodies (86%), mucopurulent nasal discharge (24%), foul nasal odor (9%), epistaxis (6%), nasal obstruction (3%), and mouth breathing (2%).
8.**(C).** Common causes of nosebleeds from the anterior septum include digital trauma, foreign bodies, dry air, and inflammation, including upper respiratory tract infections, sinusitis, and allergic rhinitis. Young infants with significant gastroesophageal reflux into the nose rarely present with epistaxis secondary to mucosal inflammation.
9.**(E).** Cystic fibrosis is the most common childhood cause of nasal polyposis and should be suspected in any child <12 yr old with nasal polyps, even in the absence of typical

respiratory and digestive symptoms; as many as 30% of children with cystic fibrosis acquire nasal polyps.

10.**(A).** Vitamin C, guaifenesin, and inhalation of warm, humidified air are no more effective than placebo for the treatment of cold symptoms.

11.**(D).** Lemierre syndrome is a serious complication of F. necrophorum pharyngitis and is characterized by septic thrombophlebitis of the internal jugular veins with septic pulmonary emboli, producing hypoxia and pulmonary infiltrates.

12.**(D).** Because cough receptors also reside in the pharynx, paranasal sinuses, stomach, and external auditory canal, the source of a persistent cough may need to be sought beyond the lungs.

13.**(D).** Habit cough ("psychogenic cough" or "cough tic") must be considered in any child with a cough that has lasted for weeks or months, that has been refractory to treatment, and that disappears with sleep or with distraction.

14.**(B).** A "silent chest" with infiltrates should arouse suspicion of alveolar proteinosis, Pneumocystis jiroveci infection, genetic disorders of surfactant synthesis and secretion causing interstitial pneumonitis, or tumors.

15.**(B).** This dramatic, potentially lethal condition is characterized by an acute rapidly progressive and potentially fulminating course of high fever, sore throat, dyspnea, and rapidly progressing respiratory obstruction. The barking cough typical of croup is rare.

16.**(E).** Children with croup should be hospitalized for any of the following: progressive stridor, severe stridor at rest, respiratory distress, hypoxia, cyanosis, depressed mental status, poor oral intake, or the need for reliable observation.

17.**(D).** Bacterial tracheitis often follows a viral respiratory infection (especially laryngotracheitis), so it may be considered a bacterial complication of a viral disease, rather than a primary bacterial illness.

18.**(B).** Laryngomalacia is the most common congenital laryngeal anomaly and the most common cause of stridor in infants and children. Sixty percent of congenital laryngeal anomalies in children with stridor are due to laryngomalacia.

19.**(B).** Multiple studies have tried to predict which early wheezers will go on to have asthma in later life. Risk factors for persistent wheezing include parental history of asthma and allergies, maternal smoking, persistent rhinitis (apart from acute upper respiratory tract infections), eczema at <1 yr of age, and frequent episodes of wheezing during infancy.

20.**(B).** Cardiovascular causes of wheezing include dilated chambers of the heart including massive cardiomegaly, left atrial enlargement, and dilated pulmonary arteries.

21.**(B).** In 50% of cases, a cause of CLE can be identified. Congenital deficiency of the bronchial cartilage, external compression by aberrant vessels, bronchial stenosis, redundant bronchial mucosal flaps, and kinking of the bronchus caused by herniation into the mediastinum have been described as leading to bronchial obstruction and subsequent CLE and commonly affects the left upper lobe.

22.**(E).** Open lung biopsy or transbronchial biopsy remains the best means of establishing the diagnosis of BO.
23.**(D).** Air bronchograms is usually present in non cardiogenic edema while the other findings are usually found in cardiogenic pulmonary edema.
24.**(A).** Oropharyngeal incoordination is reportedly the most common underlying problem associated with recurrent pneumonias in hospitalized children. In one series of 238 children hospitalized with recurrent pneumonia, 48% were found to have dysphagia as the underlying problem.
25.**(E).** The most common etiology of PIE syndromes includes parasite infections and drug reactions.
26.**(B).** Streptococcus pneumoniae (pneumococcus) is the most common bacterial pathogen in children 3 wk to 4 yr of age, whereas Mycoplasma pneumoniae and Chlamydophila pneumoniae are the most frequent pathogens in children 5 yr and older.
27.**(E).** The most frequent pathogens of pneumonia in children 4 mo-4 yr (in order of freguency) are Respiratory syncytial virus, other respiratory viruses (parainfluenza viruses, influenza viruses, and adenovirus), S. pneumoniae, H. influenzae (type b, nontypable), Mycoplasma pneumoniae, and group A streptococcus.
28.**(A).** Recurrent pneumonia is defined as 2 or more episodes in a single year or 3 or more episodes ever, with radiographic clearing between occurrences.
29.**(C).** Tachypnea is the most consistent clinical manifestation of pneumonia. Increased work of breathing accompanied by intercostal, subcostal, and suprasternal retractions, nasal flaring, and use of accessory muscles is common.
30.**(B).** Sickle cell anemia with acute chest syndrome.
31.**(E).** In the developed world, cystic fibrosis is the most common cause of clinically significant bronchiectasis.
32.**(A).** The most common complaints in patients with bronchiectasis are cough and production of copious purulent sputum. Younger children may swallow the sputum. Hemoptysis is seen with some frequency. Fever can occur with infectious exacerbations. Anorexia and poor weight gain may occur as time passes.
33.**(C).** CF is responsible for most cases of exocrine pancreatic insufficiency in early life and is the major cause of severe chronic lung disease in children. It is also responsible for many cases of salt depletion, nasal polyposis, pansinusitis, rectal prolapse, pancreatitis, cholelithiasis, and insulin-dependent hyperglycemia. CF may manifest as failure to thrive and, occasionally, as cirrhosis or other forms of hepatic dysfunction.
34.**(A).** The earliest pathologic lesion in the lung is that of bronchiolitis (mucous plugging and an inflammatory response in the walls of the small airways); with time, mucus accumulation and inflammation extend to the larger airways (bronchitis).
35 **(D).**
36.**(B).** Failure to thrive 37.5%; persistent respiratory symptoms 45.6%; abnormal stools 28.8%; meconium ileus 19.9%; hepatobiliary disease 1.2%

37.**(C).** More than 95% of males are azoospermic because of failure of development of Wolffian duct structures, but sexual function is generally unimpaired.
38.**(E).** Dilution, malnutrition, edema, insufficient sweat quantity, hyponatremia, and cystic fibrosis transmembrane conductance regulator (CFTR) mutations with preserved sweat duct function are causes of false negative sweat test.
39.**(E).** The finding of S. aureus or P. aeruginosa on culture of the lower airways (sputum) strongly suggests a diagnosis of CF. In particular, mucoid forms of P. aeruginosa are often recovered from CF lungs. B. cepacia recovery also suggests CF. A wide range of other organisms are frequently recovered, particularly in advanced lung disease; they include a variety of gram-negative rods, fungi, and nontuberculous mycobacterial species.
40.**(E).** Aerosolized antibiotics are often used when the airways are colonized with Pseudomonas as part of daily therapy. Aerosolized tobramycin, TOBI, used as a suppressive therapy (on 1 month, off 1 month) may reduce symptoms, improve pulmonary function, and alleviate the need for hospitalization.
41.**(D).** Left-right laterality defects are found in PCD; 50% of patients have situs inversus totalis with transposition of the thoracic and abdominal organs.
42.**(D).** Heiner syndrome is a cause of diffuse alveolar hemorrhage (DAH) syndromes without pulmonary capillaritis.
43.**(A).** Pathologic findings have included elevations of IgE.
44.**(C).** The anemia of IPH can mimic a hemolytic anemia. Elevations of plasma bilirubin are caused by absorption and breakdown of hemoglobin in the alveoli.
45.**(B).** In IPH, early treatment with systemic corticosteroids is the treatment of choice.
46.**(A).** A commonly encountered risk factor for DVT and PE in the pediatric population is the presence of a central venous catheter. The presence of a catheter in a vessel lumen as well as instilled medications can induce endothelial damage and favor thrombus formation.
47.**(D).** Metastatic lesions are the most common forms of pulmonary malignancy in children; primary processes include Wilms tumor, osteogenic sarcoma, and hepatoblastoma.
48.**(C).** The most common cause of pleural effusion in children is bacterial pneumonia.
49.**(E).** Acute asthma is the most common cause of pneumomediastinum in older children and teenagers. Simultaneous pneumothorax is unusual in these patients.
50.**(B).** Pneumatocele, lung abscess, and bronchopleural fistula are infectious causes of pneumothorax in children.
51**(E).** Hydrothorax is most often associated with cardiac, renal, or hepatic disease. It can also be a manifestation of severe nutritional edema and hypoalbuminemia. Rarely, it results from vascular obstruction by neoplasms, enlarged lymph nodes, pulmonary embolism, or adhesions. It may occur from a ventriculoperitoneal shunt or peritoneal dialysis and has been reported in congenital parvovirus B19 infection.
52.**(E).** Rupture of an aneurysm is unlikely during childhood.
53.**(E).** The cells are primarily T lymphocytes.

54.**(D).** An accepted definition includes an oxygen requirement for 28 days postnatally, and the disorder is graded as mild, moderate or severe on the basis of supplemental oxygen requirement and gestational age.
55.**(A).** Physical findings of the pulmonary exam vary with the severity of disease. Tachypnea is a common finding.
56**.(C).** The etiology of wheezing in BPD may be lower airway inflammation, bronchial smooth muscle irritation, bronchial smooth muscle hypertrophy, and airway malacia.
57.**(B).** It may be associated with a connective tissue disorder (Marfan or Ehlers-Danlos syndrome).
58.**(B).** Males are affected 4 times more often than females.
59.**(E).** Acute respiratory insufficiency is often the most prominent clinical manifestation of several acute neuromuscular disorders, such as high-level spinal cord injury, poliomyelitis, Guillain-Barre syndrome, and botulism. Although much more insidious in its clinical course, respiratory dysfunction constitutes the leading cause of morbidity and mortality in progressive neuromuscular disorders (e.g., Duchenne muscular dystrophy, spinal muscular atrophy, congenital myotonic dystrophy, myasthenia gravis, and Charcot-Marie-Tooth disease).
60.**(E).** Physical examination reveals a narrowed thorax that, at birth, is much smaller than the head circumference. The ribs are horizontal, and the child has short extremities. Chest radiographs demonstrate a bell-shaped chest cage with short, horizontal, flaring ribs and high clavicles.
61.**(B).** Curves >10 degrees define the presence of scoliosis.